ABSTRACT OF THE DISCLOSURE

A source gas is fed into a discharge space of a reactor and an electric power is applied to generate discharge in the discharge space to decompose the

5 source gas, thereby forming a deposited film. A plurality of discharge means are disposed in the reactor. In the deposited-film formation, the following steps are switched from one to another at a given timing: i) a first step of applying an electric power to a first discharge means to generate discharge to form the deposited film and ii) a second step of applying an electric power to a second discharge means to generate discharge to form the deposited film.